



P53821C (CPA / Small Entity) 16 July 1999

Applicant: RICHARD G. HYATT JR.

S.N.: 08/720,070

Filed: 27 September 1996

For: *ELECTROMECHANICAL CYLINDER PLUG.*

**Document(s) filed:**

1. AMENDMENT
2. Check #33282 for \$45.00 & Fee Transmittal



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**FEE TRANSMITTAL**

Patent fees are subject to annual revision on October 1.  
These are the fees effective October 1, 1997.  
Small Entity payments must be supported by a small entity statement,  
otherwise large entity fees must be paid. See Forms PTO/SB/09-12.  
See 37 C.F.R. §§1.27 and 1.28.

**Complete If Known**

|                      |   |
|----------------------|---|
| Application Number   | 08/720,070 (filed on 27 September 1996) |
| Filing Date          | CPA filed on 8 July 1999                |
| First Named Inventor | RICHARD G. HYATT JR.                    |
| Examiner Name        | BOUCHER, D.                             |
| Group/Art Unit       | 3627                                    |
| Attorney Docket No.  | P53821C                                 |

TOTAL AMOUNT OF PAYMENT

(\$)**45.00****METHOD OF PAYMENT (check one)**

1. ☐ The Commissioner is hereby authorized to charge indicated fees and credit any over payments to:

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Deposit Account Number: \_\_\_\_\_

- ☐ Charge Any Additional Fee Required Under 37 C.F.R. §1.16 and 1.17. ☐ Charge the Issue Fee Set in 37 C.F.R. §1.18 at the Mailing of the Notice of Allowance.

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**FEE CALCULATION****1. BASIC FILING FEE**

| Large Entity Fee Code | Small Entity Fee Code | Fee (\$) | Fee (\$) | Fee Description        | Fee Paid              |
|-----------------------|-----------------------|----------|----------|------------------------|-----------------------|
| 101                   | 201                   | 760      | 380      | Utility filing fee     | \$                    |
| 106                   | 206                   | 310      | 155      | Design filing fee      | \$                    |
| 107                   | 207                   | 480      | 240      | Plant filing fee       | \$                    |
| 108                   | 208                   | 760      | 380      | Reissue filing fee     | \$                    |
| 114                   | 214                   | 150      | 75       | Provisional filing fee | \$                    |
| <b>SUBTOTAL (1)</b>   |                       |          |          |                        | <b>(\$)<u>.00</u></b> |

**2. EXTRA CLAIM FEES**

| Total claims       | Extra Claims | Fee from below | Fee Paid |
|--------------------|--------------|----------------|----------|
| -20** = 5          | x            | 9.00           | = 45.00  |
| Independent Claims | -3** =       | x              | =        |
| Multiple Dependent |              |                | =        |

\*\* or number previously paid, if greater; For Reissues, see below

**Large Entity Small Entity**

| Fee Code | Fee (\$) | Fee Code | Fee (\$) | Fee Description  |
|----------|----------|----------|----------|--|
| 103      | 18       | 203      | 9        | Claims in excess of 20                                     |
| 102      | 78       | 202      | 39       | Independent claims in excess of 3                          |
| 104      | 260      | 204      | 130      | Multiple dependent claim, if not paid                      |
| 109      | 78       | 209      | 39       | ** Reissue independent claims over original patent         |
| 110      | 18       | 210      | 9        | ** Reissue claims in excess of 20 and over original patent |

**SUBTOTAL (2)**(\$)**45.00****3. ADDITIONAL FEES**

| Large Entity Fee Code | Small Entity Fee Code | Fee (\$) | Fee (\$) | Fee Description  | Fee Paid |
|-----------------------|-----------------------|----------|----------|--|----------|
| 105                   | 205                   | 130      | 65       | Surcharge-late filing fee or oath  | \$       |
| 127                   | 227                   | 50       | 25       | Surcharge-late provisional filing fee or cover sheet                       | \$       |
| 139                   | 239                   | 130      | 130      | Non-English specification  | \$       |
| 147                   | 247                   | 2,520    | 2,520    | For filing a request for reexamination                                     | \$       |
| 112                   | 212                   | 920*     | 920*     | Requesting publication of SIR prior to Examiner action                     | \$       |
| 113                   | 213                   | 1,840*   | 1,840*   | Requesting publication of SIR after Examiner action                        | \$       |
| 115                   | 215                   | 110      | 55       | Extension for reply within first month                                     | \$       |
| 116                   | 216                   | 380      | 190      | Extension for reply within second month                                    | \$       |
| 117                   | 217                   | 870      | 435      | Extension for reply within third month                                     | \$       |
| 118                   | 218                   | 1,360    | 680      | Extension for reply within fourth month                                    | \$       |
| 128                   | 228                   | 1,850    | 925      | Extension for reply within fifth month                                     | \$       |
| 119                   | 219                   | 300      | 150      | Notice of Appeal   | \$       |
| 120                   | 220                   | 300      | 150      | Filing a brief in support of an appeal                                     | \$       |
| 121                   | 221                   | 260      | 130      | Request for oral hearing   | \$       |
| 138                   | 238                   | 1,510    | 1,510    | Petition to institute a public use proceeding                              | \$       |
| 140                   | 240                   | 110      | 55       | Petition to revive - unavoidable   | \$       |
| 141                   | 241                   | 1,210    | 605      | Petition to revive - unintentional   | \$       |
| 142                   | 242                   | 1,210    | 605      | Utility issue fee (or reissue)   | \$       |
| 143                   | 243                   | 430      | 215      | Design issue fee   | \$       |
| 144                   | 244                   | 580      | 290      | Plant issue fee  | \$       |
| 122                   | 222                   | 130      | 130      | Petitions to the Commissioner  | \$       |
| 123                   | 223                   | 50       | 50       | Petitions related to provisional applications                              | \$       |
| 126                   | 226                   | 240      | 240      | Submission of Information Disclosure Statement                             | \$       |
| 581                   | 581                   | 40       | 40       | Recording each patent assignment per property (Times number of properties) | \$       |
| 146                   | 246                   | 760      | 380      | Filing a submission after final rejection (37 C.F.R. §1.129(a))            | \$       |
| 149                   | 249                   | 760      | 380      | For each additional invention to be examined (37 C.F.R. §1.129(b))         | \$       |

Other Fee (specify) \_\_\_\_\_

Other Fee (specify) \_\_\_\_\_

\*\* Reduced by Basic Filing Fee Paid

**SUBTOTAL (3)**

-\$0.00

**SUBMITTED BY****Complete (if applicable)**

Typed or Printed Name

Robert E. Bushnell, Esq.

Reg. Number

27,774

Signature

*Robert E. Bushnell*

Date

16 July 1999

Deposit Account User ID

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08/720,070 (CPA) SMALL ENTITY

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:

RICHARD G. HYATT JR.

Serial No.: 08/720,070 (CPA application) Examiner: BOUCHER, D.

Filed: 27 September 1996 Art Unit: 3627

For: ELECTROMECHANICAL CYLINDER PLUG

**AMENDMENT**

Assistant Commissioner  
for Patents  
Washington, D.C. 20231

Sir:

Entry of the following amendments in response to the final Office actions (Paper No 20)  
dated 8 February 1999, entry of the following amendments and remarks, and re-examination and  
reconsideration, are respectfully requested.

Folio: P53821C  
Date: 07/16/99  
I.D.: REB/kf

**COPY**

IN THE CLAIMS

Please amend Claims 6, 11 through 13, 25, 26, 28, 29, 31, and 32 and add Claims 34 through 38, as follows:

1           6. (Thrice Amended) A lock, comprising:

2                   a cylinder containing a hollow recess defining a longitudinal axis;

3                   a plug bearing a plurality of open radially oriented apertures forming an array, said  
4 plug being rotatable around said longitudinal axis while resident within said hollow recess, said plug  
5 comprising:

6                   a first base bearing a keyway providing a first electrical conductor and an  
7 orifice spaced-apart from and separated by a mass of said plug from said keyway;

8                   a second base separated by an axial length of said plug from said first base,  
9 said second base bearing means for supporting a cam;

10                  an exterior surface extending between and engaging said first base and said  
11 second base;

12                  a sidebar positioned between said first base and said second base to reciprocate  
13 between a first location with said sidebar simultaneously engaging said plug and said cylinder  
14 surrounding said plug, and a second location releasing said plug for rotation relative to the cylinder;

15                  locking means disposed within said apertures to reciprocate relative to said cylinder  
16 in response to a key inserted into said keyway to accommodate reciprocation of said sidebar relative  
17 to said plug and relative to said cylinder when the key while inserted into said keyway engages in

18 a selected relation with said locking means, and obstructing said reciprocation absent said selected  
19 relation;

20 a second electrical conductor terminating with an electrical contact exposed to an  
21 exterior of said first base through said orifice;

22 an electronic logic circuit borne by said plug, coupled to receive electrical power and  
23 data signals via said first and second electrical conductors, and generating control signals in  
24 dependence upon said electrical power and data signals; and

25 an electrical operator borne by said plug, disposed within one of said apertures, said  
26 operator having a distal member radially [reciprocating] traveling along an axis transverse to said  
27 longitudinal axis, in dependence upon said control signals between a first position relative to said  
28 exterior surface accommodating said reciprocation and a second and different position relative to  
29 said exterior surface obstructing said reciprocation in concert with said locking means[, said  
30 reciprocation].

1 11. (Twice Amended) A lock, comprising:

2 a shell containing a hollow recess defining a longitudinal axis and an [intenser]  
3 interior cylindrical surface;

4 a plug rotatable around said longitudinal axis while resident within said hollow  
5 recess, and a bar interposed between said shell and said plug to reciprocate generally along a radial  
6 [plate] plane between a first position engaging both said shell and said plug while obstructing  
7 rotation of said plug within said recess, and a second position accommodating said rotation[;], said

8 plug comprising:

9 a first base bearing a keyway providing a first electrical conductor and an  
10 orifice spaced-apart from and separated by a mass of said plug from said keyway;

11 a second base separated by an axial length of said plug from said first base,  
12 said second base bearing means for supporting a cam;

13 an exterior surface extending between and engaging said first base and said  
14 second base;

15 locking means responsive to a key inserted into said keyway to accommodate  
16 reciprocation of said bar between said first position and said second position when the key  
17 while inserted into said keyway engages in a selected relation with said locking means and  
18 obstructing said reciprocation absent said selected relation;

19 a second electrical conductor terminating with an electrical contact exposed  
20 to an exterior of said first base through said orifice;

21 an electronic logic circuit coupled to receive electrical power and data signals  
22 via said first and second electrical conductors, and generating control signals in dependence  
23 upon said electrical power and data signals; and

24 an electrical operator having a distal member radially reciprocating along an  
25 axis transverse to said longitudinal axis, in dependence upon said control signals between  
26 a first orientation relative to said exterior surface enabling said reciprocation and a second  
27 and different orientation relative to said exterior surface obstructing said reciprocation.

1 12. (Amended) The plug of claim 1, [with] further comprised of said:

2 [locking means comprising a sidebar movably borne by said plug with an edge of said  
3 sidebar disposed to engage the cylinder; and]

4 electrical operator comprising an electrical coil coaxially aligned with said distal  
5 member, to [displace] move said distal member [from] between said [first] second position [to] and  
6 said [second] first position in response to said control signals; and

7 [said] distal member bearing a circumferential surface blocking said [radial  
8 movement of said sidebar] reciprocation while said distal member is in said second position, and a  
9 [groove] variation in said circumferential surface accommodating said [radial movement]  
10 reciprocation while said distal member is in said first position.

1 13. (Amended) The plug of claim 6, [with] further comprised of said:

2 [locking means comprising a sidebar movably borne by said plug with an edge of said  
3 sidebar disposed to engage the cylinder; and]

4 electrical operator comprising an electrical coil coaxially aligned with said distal  
5 member, to [displace] more said distal member [from] between said [first] second position [to] and  
6 said [second] first position in response to said control signals; and

7 [said] distal member bearing a circumferential surface blocking said radial movement  
8 of said sidebar while said distal member is in said second position, and a [groove] variation in said  
9 circumferential surface accommodating said [radial movement] reciprocation while said distal  
10 member is in said first position.



1           25. (Amended) A lock, comprising:

2                   a shell containing a hollow recess defining a longitudinal axis and an [intensor]  
3           interior cylindrical surface;

4                   a plug rotatable around said longitudinal axis while resident within said hollow  
5           recess[.];

6                   a bar interposed between said shell and said plug to reciprocate generally along a  
7           radial [plate] plane between a first position engaging both said shell and said plug while obstructing  
8           rotation of said plug within said recess, and a second position accommodating said rotation, said  
9           plug comprising:

10                   a first base and a second base separated by an axial length of said plug from said first  
11           base, said second base bearing means for supporting a cam; and

12                   an electrical operator[,]  
13           borne by said plug and rotatable with said plug, said electrical  
14           operator being electrically operable to respond to a control signal by moving between a first  
                  orientation and a second and different orientation providing obstruction of said bar.

1           26. (Amended) The lock of claim 25, [with said electrical operator, responsive to] further  
2           comprised of:

3                   a logic circuit generating said control [signals] signal in response to a comparison  
4           between a code set within said logic circuit and a data signal applied to said logic circuit; and  
5           said electrical operator moving between said second orientation and said first

6 orientation in response to said control signal [from a logic circuit].

1 28. (Amended) The lock of claim 27, [wherein] further comprised of a locking mechanism  
2 borne by said plug, said plug being perforated by an aperture admitting reciprocal travel of a key  
3 relative to said locking mechanism, and said locking mechanism obstructing movement of said plug  
4 relative to said shell absent the key [engages in] exhibiting a selected relation with said locking  
5 [means] mechanism.

1 29. (Amended) The lock of claim 25, further comprised of a plurality of electrical  
2 conductors borne by said lock to engage a circuit in [the] a key inserted into said plug.

1 31. (Amended) The lock of claim 30, further comprised of said power source being mounted  
2 on [the] a key.

1 32. (Amended) The lock of claim 25, further comprised of a network of plugs including said  
2 plug, and a switching device controlling operation of said network.[.]

1 --34. The lock of claim 1, further comprised of said:  
2 electrical operator comprising an electrical coil moving said distal member, to  
3 reciprocate said distal member between said first position and said second position in response to  
4 said control signals; and

5           said distal member bearing a circumferential surface blocking said radial movement  
6 of said sidebar while said distal member is in said second position, and accommodating said radial  
7 movement while said distal member is in said first position.

1           --35. The lock of claim 6, further comprised of said:

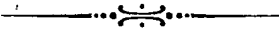
2           electrical operator comprising an electrical coil moving said distal member, to  
3 reciprocate said distal member between said first position and said second position in response to  
4 said control signals; and

5           said distal member bearing a circumferential surface blocking said radial movement  
6 of said sidebar while said distal member is in said second position, and accommodating said radial  
7 movement while said distal member is in said first position.

1           --36. The lock of claim 16, further comprising said distal member bearing a mass engaging  
2 said detent and blocking said rotation while said distal member is in said first position, and a groove  
3 through said mass accommodating relative passage between said distal member relative to said  
4 detent while said distal member is in said second position.

1           --37. The lock of claim 16, further comprising said distal member bearing a mass exhibiting  
2 a first height accommodating relative passage between said distal member relative to said detent  
3 while said distal member is in said second position, and a second and greater height engaging and  
4 blocking said rotation while said distal member is in said first position.

1           --38. The lock of claim 16, further comprising said distal member bearing a mass having a  
2    periphery engaging said detent and blocking said rotation while said distal member is in said first  
3    position, and a central variation in said mass relative to said periphery accommodating relative  
4    passage between said distal member and said detent while said distal member is in said second  
5    position.



**REMARKS**

Claims 1 through 38 are pending in this application. Claims 6, 11 through 13, 25, 26, 28, 29, 31, and 32 have been amended and Claims 34 through 38 have been newly presented in order to alternatively and more broadly define the various features of Applicant's disclosed inventions.

In Paper No. 17 the Examiner noted that Claims 12 and 13 define Applicant's second borne. In order to broaden the scope of coverage defined by Claims 12 and 13, Applicant has deleted lines 2 and 3, in accordance with the Examiner's suggestion. Dependent Claims 34 and 35 are newly added to more broadly define Applicant's disclosed structure, and to additionally cover possible modifications of Applicant's disclosed structures such as the circumferential surface constituting a ridge while the adjoining surface constitutes a second circumferential surface with a lesser diameter, for example.

These claims are allowable for the reasons set forth in Applicant's earlier response and, in view of the complete absence of the combination of features defined by these claims, in any of the prior art.

Applicant notes that the designation of Paper No. 17 as "final" is premature; Claims 25 through 33 have not yet been considered. Applicant notes however, that the Examiner incorrectly addressed Paper No. 17. Without correspondence to Applicant, the Examiner then issued Paper No. 20.

In Paper No. 20, the Examiner objected to Claims 11, 25 and 32. The basis for the objection has been removed by the foregoing amendments.

Claims 12, 13, 28, 29 and 31 through 33 were rejected under the second paragraph of 35 U.S.C. §112, principally on questions of antecedent basis. The grounds for these rejections have been removed by the foregoing amendment. In one exception however, the Examiner questions Claims 32 and 33, namely a network of plugs. These claims depend upon allowable independent claims as will be explained in the following paragraph. Accordingly, there is no basis for the quasi-requirement of restriction, particularly at this point of prosecution. Moreover, the parent independent claim is generic to several of the classes previously identified in the requirement for restriction. In view of the foregoing amendments therefore, this rejection should be withdrawn.

Claims 25 through 33 were rejected under 35 U.S.C. §103(a) as rendered obvious by a proposed combination of Aston '042 and Clarkson '859. Although Applicant disagrees with the basis for this rejection, Applicant notes that as amended, Claim 25 clearly recites that the electrical operator is borne by the plug, a feature neither taught nor suggested by the proposed combination of Aston '042 and Clarkson '859. Specifically, in this proposed combination both the operator and the logic circuits are located outside of plug 11 of Aston '042. The structure shown for example, in Figs. 5-6B of the secondary reference preserve this location. In view of the fact that neither of these reference either appreciates nor recognizes the need for compactedness as well advantageous ability of retrofitting a lock simply by replacing the plug, as opposed to both the plug in the cylinder or,

alternatively, of structurally modifying the entire lock, negates any suggestion of obviousness. Accordingly, Claims 25 through 35 are deemed to be patentably distinguishable over the art.

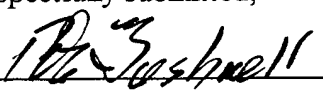
The Examiner has referred to a telephone discussion initiated by the Examiner on 18 January 1999. It should be remembered that Applicant's undersigned attorney was engaged in the preparation of a different and unrelated application at the time of the discussion, and was unable to immediately respond to the Examiner's telephone request. Moreover, the Examiner immediately issued Paper No. 17 on 21 January 1999. The Supplemental Amendment filed on the 20<sup>th</sup> had been in preparation and there was no reason not to immediately file the Supplemental Amendment in order to present the claims desired by Applicant for examination. The Examiner's care to review these claims is noted with appreciation.

A fee of \$45 (**SMALL ENTITY**) is incurred by addition of five (5) claims in excess of 33. Applicant's checks drawn to the order of Commissioner accompanies this Amendment. Should the check become lost, should other fees be incurred, the Commissioner is authorized to charge Deposit Account No. 02-4943 of Applicant's undersigned attorney in the amount of such fees.

Applicant further notes that two Notices of Change of Address have been filed in this application; to date, the Group Director seems to have studiously ignored both. Consequently, Applicant is not timely receiving correspondence from the Office. It is hoped that this will be corrected without further inconvenience or expense to the Applicant.

In view of the foregoing, the Examiner is respectfully requested to reconsider the application, withdraw the objections and/or rejections and pass the application to issue in view of the above amendments and/or remarks. Should any questions remain unresolved, the Examiner is requested to telephone Applicant's attorney.

Respectfully submitted,



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